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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/038,529 | 01/03/2002 | Mahesh Jayachandra | 13860.2US01 | 6029* |

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EXAMINER

ALPHONSE, FRITZ

| ART UNIT | PAPER NUMBER |
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2675

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DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,529

Applicant(s)

JAYACHANDRA, MAHESH

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-14, 16-31 and 35 is/are rejected.
- 7) ☒ Claim(s) 10, 15 and 32-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-4, 16-26 and 30-31 are rejected under 35 U.S.C. 102(a) as being anticipated by Laukkanen (Pub. No. US 2003/0119551).

As to claim 1, Laukkanen discloses a character input system using a keyboard comprising a plurality of keys (see page 1, [0007]), at least some of the keys each being assigned at least one Hindi script character [0005], and at least one key being assigned a halant (see figure 3), the key assignments being spatially grouped on the keyboard according to their phonetic characteristics ([0008-0009]).

As to claim 2, Laukkanen discloses a character input system, wherein the key assignments are also grouped according to the vowels and consonants (see figure 6 and [0004, 0008, 0009]).

As to claims 3-4, Laukkanen discloses a character input system, wherein Hindi script consonants are spatially grouped according to Vargs and Non-Vargs, and wherein the keys comprising each Varg are grouped on keys that are adjacent to one another (see [0053] and figure 6).

As to claim 16 –17, Laukkanen discloses a character input system, wherein the keyboard is adapted for use with the Hindi language and an Indian Brahmi-based script based on similarities to Hindi (see [0007 to 0008]).

As to claims 18-20, Laukkanen discloses a keyboard adapted for use character input system with one of the group of Bengali, Telegu, Marathi, Tamil, Gujarati, Kannada, Malayalam, Oriya, Punjabi, Assamese, Manipuri and Sanskrit; and any non-Indian Brahmi-based script.

As to claim 21, Laukkanen discloses keyboard for the use with a Brahmi-derived script (see figure 6 and [0004, 0008, 0009]) comprising: vowel keys (fig. 6; keys 1-2) mapped to the vowels; consonant keys (fig. 6; keys 3-7), each subset comprising keys mapped to a group of phonetically-related initial consonants, at least some of each subset of initial consonant keys being arranged on a single row; and a halant key (fig. 3); wherein Brahmi-derived script communications may be inputted quickly and efficiently as a result of the arrangement of character keys and a simplified character set provided through use of the halant character.

As to claims 22-24, Laukkanen discloses a keyboard, wherein a row comprises horizontally adjacent keys and is adapted for use with the Hindi script; and wherein the initial consonants comprise Varg consonants and the final consonant comprise non-Varg consonants (see figure 6).

As to claim 25, method claim 25 corresponds to apparatus claim 1-4; therefore, it is analyzed as previously discussed in claims 1-4 above.

As to claim 26, Laukkanen (fig. 1) shows a keyboard computer system for use with a language that uses Brahmi-derived script, the computer system comprising: a processor (Laukkanen teaches mobile station 100 includes a processor; see [0037]) memory system; a

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graphical user interface ([0038]); and a Brahmi-derived script keyboard comprising a plurality of keys, at least some of the keys each being assigned at least one Brahmi-derived script character, and at least one key being assigned a halant, the key assignments being spatially grouped on the keyboard according to phonetic characteristics of the characters (see figures 6-9).

As to claims 30-31, the claims have substantially the limitations of claims 1-4; therefore, they are analyzed as previously discussed in claims 1-4 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-9, 11-14, 27, 28, 35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Laukkanen in view of Weeks (U.S. Pat. No. 5,880,685).

As to claims 5-6 and 8-9, Laukkanen (fig. 6 Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laukkanen) shows five Vargs of consonant keys containing five phonetically-related consonants in a single row. But, he does not show a keyboard.

However, in the same field of endeavor, Weeks (fig. 1) shows a typewriter keyboard capable of performing many functions.

Therefore, it would have been obvious to one skilled in the art, at the time of the invention, to improve upon the computer keyboard, as disclosed by Weeks. Doing so would provide a keyboard with a substantially reduced number of keys/controls.

As to claim 7 and 14 and 35, Laukkanen does not explicitly disclose that the five Varg consonant sets are assigned to keys that correspond to q-w-e-r-t, a-s-d-f-g, z-x-c-v-b, y-u-i-o-p, and h-j-k-l-; on a standard keyboard.

However, this is obvious; it would have been obvious to one skilled in the art, at the time of the invention to assign the five Varg consonant sets to keys that correspond to q-w-e-r-t-y keyboard system (see Weeks' q-w-e-r-t-y keyboard system: figure 1).

As to claims 11-12, Laukkanen (fig. 6) shows a character input system comprises a plurality of Hindi script vowel keys, each vowel key being assigned to a Hindi script vowel; and wherein the Hindi vowel keys are grouped together .

Laukkanen does not disclose that the character input are grouped together on a keyboard. However, these limitations are disclosed by Weeks (figure 1). See the motivations above.

As to claim 13, the claim has substantially the limitations of claim 4; therefore, it is analyzed as previously discussed in claim 4 above.

As to claims 27-28 Laukkanen does not disclose a system comprises a virtual keyboard having a touch-sensitive screen.

However, this is obvious; it would have been obvious to one skilled in the art, at the time of the invention to use a system comprising a touch-sensitive virtual keyboard. Doing so would improve the reliability of detecting, classifying, and interpreting input events.

5. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weeks in view of Laukkanen.

As to claim 29, Weeks (fig. 1) shows a keyboard, the keyboard comprising: a group of vowel keys corresponding to the number-row on a standard keyboard; a first group of phonetically-related consonant keys comprising keys corresponding to Q-W-E-R-T on a standard keyboard; a second group of phonetically-related consonant keys comprising keys corresponding to A-S-D-F-G on a standard keyboard; a third group of phonetically-related consonant keys comprising keys corresponding to Z-X-C-V-B on a standard keyboard; a fourth group of phonetically-related consonant keys comprising keys corresponding to Y-U-I-O-P on a standard keyboard; and a fifth group of phonetically-related consonant keys comprising keys corresponding to H-J-K-L-; on a standard keyboard; a final group of Non-Varg consonant keys comprising keys corresponding to N-M-,.-/'-[-] on a standard keyboard.

Weeks does not teach about a keyboard adapted for use with Hindi script comprising a first, second, third, fourth, fifth Varg group of phonetically related consonant keys and a final group of non-Varg keys. However, these limitations are disclosed by Laukkanen (see figure 6).

Therefore, it would have been obvious to one skilled in the art, at the time of the invention, to improve upon the Numeric Keypad and, as disclosed Laukkanen. Doing so would provide the easiest way to enter Hindi language text into a keyboard.

Allowable Subject Matter

6. Claims 10, 15, 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sugano (U.S. Pat. No. 5,457,454) discloses an input device utilizing virtual keyboard.

Jurion et al. (U.S. Pat. No. 6,631,501) disclose a system for automatic type and replace of characters in a sequence of characters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703)-308-8534. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J Saras can be reached on (703)-305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C. 20231

Or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-306-0377.



Fritz Alphonse

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December 12, 2003



STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600